

**DUAL-ENERGY ELECTRON FLOODING FOR NEUTRALIZATION OF  
CHARGED SUBSTRATE**

Abstract of the Disclosure

One embodiment disclosed relates to a method of electron beam inspection or review of a substrate having insulating materials therein. An area of the substrate is simultaneously exposed to a lower-energy electron beam and an overlapping higher-energy electron beam. The area is subsequently inspected with another electron beam. Another embodiment disclosed relates to an electron beam tool for examination of a substrate having insulating materials therein. A first cathode is configured as an electron source for a lower-energy electron beam, and a second cathode is configured as an electron source for a higher-energy electron beam. At least one electron lens is configured to focus the lower-energy electron beam and the higher-energy electron beam onto an overlapping area of a substrate. An electron beam column is subsequently used to examine the substrate.